

Applicant: Desgagne et al.
Application No.: 10/828,665

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Presently Amended) A method for integrating time division duplex (TDD) and frequency division duplex (FDD) in wireless communication systems, the method comprising the steps of:

receiving radio access bearer (RAB) requests at a radio network controller (RNC) along with a plurality of parameters regarding the request;

estimating a degree of symmetry in uplink (UL) and downlink (DL) connections required to support communication associated with the RAB requests;

selecting either a TDD or FDD connection based on the estimated symmetry of the UL and DL connections.

2. (Original) The method of claim 1 wherein TDD connection is selected for RAB requests having data rates above a predetermined threshold.

3. (Original) The method of claim 1 wherein FDD connection is selected for RAB requests associated with voice applications.

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4. (Original) The method of claim 1 further comprising:
evaluating a symmetry status of the UL and DL connections periodically once
an initial connection has been established in response to a RAB request; and
switching between TDD and FDD modes based on said symmetry status.

5. (Original) The method of claim 1 wherein all RAB requests are processed
through a FDD RNC.

6. (Presently Amended) The method of claim 5 wherein only the FDD RNC
is connected to a core network through an Iu interface, and ~~[[the]]~~ a TDD RNC is
indirectly connected to the core network through the FDD RNC.

7. (Original) The method of claim 6 wherein the FDD RNC performs all call
connections and disconnections.

8. (Original) A system for integrating TDD and FDD in a communication
system, the system comprising:

a core network (CN);

a time division duplex radio network controller (TDD RNC);

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a frequency division duplex radio network controller (FDD RNC); and,

a TDD-FDD selector for receiving a RAB request and estimating symmetry status of uplink (UL) and downlink (DL) connections that is required to support the RAB assignment request, and making a decision to assign radio resources in either TDD mode or FDD mode based on the estimated symmetry status.

9. (Original) The system of claim 8 wherein a TDD connection is selected for RAB requests having data rates above a predetermined threshold.

10. (Original) The system of claim 8 wherein a FDD connection is selected for RAB requests associated with voice applications.

11. (Original) The system of claim 8 wherein the TDD RNC, the FDD RNC, and the TDD-FDD selector are integrated into an integrated TDD/FDD RNC.

12. (Original) The system of claim 8 wherein the FDD RNC includes a TDD serving radio network controller (S-RNC) and is configured to support TDD Iur protocols.

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13. (Original) The system of claim 12 wherein only the CN and the FDD RNC are connected via an Iu interface and RAB requests are processed through the FDD RNC.